

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Withdrawn) An electronic component unit comprising:

a substrate having a conductive pattern formed on a surface of said substrate; and

an electronic component mounted on said surface,

wherein said electronic component is provided with an electrode disposed facing to said substrate, a surface of a connecting area of said conductive pattern facing to said electrode is roughened, and said electrode is connected to said surface of a connecting area with an electroconductive adhesive.
2. (Withdrawn) The electronic component unit of claim 1, wherein said electronic component is a semiconductor integrated circuit, and said electrode is a protruding electrode.
3. (Withdrawn) The electronic component unit of claim 2, wherein said conductive pattern is formed of a thick-film printed pattern, and said surface of a connecting area is roughened by means of a sand blasting treatment.
4. (Withdrawn) The electronic component unit of claim 3, wherein an outer circumference of said surface of a connecting area is expanding outward.
5. (Withdrawn) The electronic component unit of claim 2, wherein said conductive pattern is formed of a thick-film printed pattern, and said surface of a connecting area is roughened by means of a dry etching treatment.
6. (Withdrawn) The electronic component unit of claim 3, wherein the surface other than said connecting area is covered with a glass film, a surface of said glass film is roughened.
7. (Withdrawn) The electronic component unit of claim 6, wherein a mark for location detection is provided on said substrate in an area void of said glass film, a surface of

said mark for location detection being roughened.

8. (Withdrawn) The electronic component unit of claim 6, wherein a connecting electrode is provided on a surface of said substrate different from said surface on which said conductive pattern is formed, said connecting electrode is coupled with said conductive pattern by means of a through hole provided in said substrate, and the whole area of said surface providing said connecting electrode excluding said connecting electrode is covered with a glass film.

9. (Withdrawn) The electronic component unit of claim 2, wherein the whole surface of said substrate not covered with said conductive pattern is roughened.

10. (Withdrawn) The electronic component unit of claim 9, wherein a gap between said electronic component and said substrate is sealed by a sealing resin.

11. (Withdrawn) The electronic component unit of claim 2, wherein an outer circumferential surface of said substrate is roughened by means of a sand blasting treatment.

12. (Withdrawn) An electronic assembly comprising:

an electronic component unit comprising a first substrate having a conductive pattern formed on a surface of said first substrate, and an electronic component mounted on said surface; and

a second substrate mounting said electronic component unit,

wherein said electronic component is provided with an electrode disposed facing to said first substrate, a surface of a connecting area of said conductive pattern facing to said electrode is roughened, and said electrode is connected to said surface of a connecting area with an electroconductive adhesive.

13. (Currently Amended) A method of manufacturing an electronic component unit comprising the steps of:

forming a conductive pattern on a surface of a substrate;

roughening a surface of a connecting area of said conductive pattern;~~and~~

printing an electroconductive adhesive on said connecting area;

connecting an electrode of an electronic component to said ~~surface of a connecting area~~
~~with an electroconductive adhesive on said connecting area; and~~

drying said adhesive at a temperature of 50-120°C.

14. (Original) The method of manufacturing an electronic component unit recited in claim 13, further comprising a step of testing the conductivity of said conductive pattern by pressing an electroconductive rubber piece for conductivity test to make contact with said surface of a connecting area, said step of testing the conductivity being carried out prior to said step of roughening.

15. (Original) The method of manufacturing an electronic component unit recited in claim 14, wherein said conductive pattern is formed by a printing process, and said surface of a connecting area is roughened by means of a sand blasting treatment.

16. (Original) The method of manufacturing an electronic component unit recited in claim 13, wherein said conductive pattern is formed by a thick-film printing process, and said surface of a connecting area is roughened by means of dry etching treatment.

17. (Original) The method of manufacturing an electronic component unit recited in claim 15, further comprising a step of covering the surface other than said connecting area with a glass film, and a surface of said glass film is roughened in a same process step for roughening said surface of a connecting area.

18. (Original) The method of manufacturing an electronic component unit recited in claim 15, wherein said surface on which said conductive pattern is formed is roughened in a same process step for roughening said surface of a connecting area.

19. (Original) The method of manufacturing an electronic component unit recited in claim 15, wherein a mark for location detection is formed on a surface of said substrate, and a surface of said mark for location detection is roughened in a same process step for roughening said surface of a connecting area.

20. (Currently Amended) The method of manufacturing an electronic component unit recited in claim 18, further comprising a step of injecting a sealing resin between said electronic component and said substrate after said step of connecting ~~an~~said electrode.

21. (Original) The method of manufacturing an electronic component unit recited in claim 18, further comprising the steps of:

covering said conductive pattern facing to a bottom surface of said electronic component with a glass film;

roughening a surface of said glass film; and

injecting a sealing resin between said electronic component and said substrate after said step of roughening a surface of said glass film.

22. (Original) The method of manufacturing an electronic component unit recited in claim 15, wherein an outer circumferential surface of said substrate is roughened in a same process step for roughening said connecting area.

23. (Original) The method of manufacturing an electronic component unit recited in claim 22, wherein said substrate is provided out of a large-size substrate having a groove for separation by separating said large-size substrate along said groove.

24. (Original) The method of manufacturing an electronic component unit recited in claim 23, wherein the step of roughening treatment is performed by first forming a sort of substrate cluster comprising a plurality of said substrates disposed in a straight line arrangement on a plate, and then blasting abrasives from a nozzle against said substrates after said sort of substrate cluster is regulated in the position at both ends in the length direction with a guide member.

25. (Original) The method of manufacturing an electronic component unit recited in claim 23, wherein the step of roughening treatment is performed by first sticking said substrate on a plate with a tape, and then blasting abrasives from a nozzle against said substrate.

26. (Original) The method of manufacturing an electronic component unit recited in claim 25, wherein the width of said tape is smaller than that of said substrate.

27. (Original) The method of manufacturing an electronic component unit recited in claim 26, wherein said tape has a predetermined length and a plurality of said substrates is stuck on said tape with a predetermined clearance in the length direction between each other.

28. (Original) The method of manufacturing an electronic component unit recited in claim 25, wherein the outer diameter of said tape is smaller than that of said substrate.

29. (Original) The method of manufacturing an electronic component unit recited in claim 25, wherein a plurality of said substrates is stuck with a predetermined clearance between each other and the roughening treatment is performed by sweeping a nozzle over said substrates.

30. (Original) The method of manufacturing an electronic component unit recited in claim 29, wherein said nozzle sweeps over said plate in a rectangular wave form.

31. (Original) The method of manufacturing an electronic component unit recited in claim 30, wherein said nozzle sweeps for plural times.

32. (Original) The method of manufacturing an electronic component unit recited in claim 31, wherein said nozzle sweeps in a second sweep along a track that is different from that in a first sweep.

33. (Original) The method of manufacturing an electronic component unit recited in claim 30, wherein said nozzle sweeps in a coming and going motion.

34. (Original) The method of manufacturing an electronic component unit recited in claim 33, wherein said nozzle in the coming sweep takes a track which is different from that in

the going sweep.

35. (Currently Amended) The method of manufacturing an electronic component unit recited in claim 24, wherein said nozzle has ~~a width of~~an opening which is larger than ~~that a~~width of said substrate.

36. (Original) The method of manufacturing an electronic component unit recited in claim 24, wherein said plate is rotated after being swept by said nozzle, and said plate is swept again by said nozzle.

37. (Original) The method of manufacturing an electronic component unit recited in claim 36, wherein the angle of rotation of said plate is approximately 90 degrees.

38. (Original) The method of manufacturing an electronic component unit recited in claim 24, wherein the roughening treatment is performed by blasting first abrasives of large grain diameter against said substrate, and then blasting second abrasives of smaller grain diameter than that of said first abrasives against than said substrate from said nozzle.

39. (Original) The method of manufacturing an electronic component unit recited in claim 24, wherein said plate is reversed upside down so as said substrate is disposed to the bottom of the plate, and said substrate is roughened with abrasives blasted upward from said nozzle located under said substrate.

40. (Original) The method of manufacturing an electronic component unit recited in claim 24, further comprising a step of blowing the roughened surface of said substrate with a gas after the roughening treatment.

41. (Original) The method of manufacturing an electronic component unit recited in claim 22, wherein said substrate after having received said roughening treatment is cleaned by means of ultrasonic cleaning in a liquid containing no oxygen.

42. (Original) The method of manufacturing an electronic component unit recited in claim 41, wherein said liquid is alcohol.

43. (Original) The method of manufacturing an electronic component unit recited in claim 42, wherein a plurality of said substrates is housed in a container in an upright position to be immersed altogether into said liquid.

44. (Original) The method of manufacturing an electronic component unit recited in claim 43, wherein each of said plurality of said substrates is housed flutterable in an individual storage space of said container.

45. (Original) The method of manufacturing an electronic component unit recited in claim 41, wherein said substrate after being pulled out of said liquid is blown with a gas containing least oxygen.

46. (Currently Amended) The method of manufacturing an electronic component unit recited in claim 45, wherein said substrate after being blown with the gas is stored for a time period in an ambience free from the atmospheric air.